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EXAMINER

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/776,112
Filing Date: February 11, 2004
Appellant(s): CONZOLA, VINCENT CHARLES

MAILED

APR 18 2006

GROUP 2800

Kelly K. Kordzik
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 1/30/06 appealing from the Office action mailed 11/29/05.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

5,497,314	Novak	3-1996
2003/0024982	Bellis, Jr. et al.	2-2003

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(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 9-17 and 24-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Novak (US 5,497,314) in view of Bellis (US 2003/0024982).

Re claim 9:

For the sake of clarity, limitations of the claim are listed below in italics, followed by a discussion of how each limitation is taught in the prior art.

Firstly it is acknowledged that aspects involving deactivating the tag are not taught in Novak; this is the reason for the combination with Bellis.

A check-out method for a product having a security tag associated therewith, comprising the steps of:
storing one or more physical characteristics for said product;

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Novak has a check-out system (column 1, line 10). As disclosed in the abstract, "By use of computerized databases, the digitized signal is compared to the finite set of data for products of approximately the same size, shape, weight and other comparative variables. "

recalling said one or more physical characteristics when a consumer checks out said product;

As Novak teaches (column 2, lines 35+):" This identification is made by computerized comparison to the digital image stored in the memory of the system. Alternatively, the identification can be made or confirmed by computerized analysis of the characteristics of the product (such as shape, weight..."

Clearly the characteristics must be recalled from memory of database to make a comparison.

placing said product in a substantially enclosed area;

The placement of the product in a substantially enclosed area is clearly shown in figures 1 and 2 and is in evidence throughout Novak.

examining said product while said product is in said substantially enclosed area;

establishing one or more physical features for said product while said product is in said substantially enclosed area;

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Figure 1 shows that all manner of examinations are performed on the product while it is in the enclosed area, ranging from bar code scanning (ref. 16) to size/shape analysis by a camera (ref. 10) to weighing by a scale (ref. 12). See also column 3, lines 15-65.

comparing said one or more physical characteristics to said one or more physical features;

As Novak teaches (column 2, lines 35+):” This identification is made by computerized comparison to the digital image stored in the memory of the system. Alternatively, the identification can be made or confirmed by computerized analysis of the characteristics of the product (such as shape, weight...”

generating a signal if said one or more physical characteristics substantially match said one or more physical features; and

See column 2, line 30 of Novak: There is a “precise determination of proper identity.” Identify means find a match (the word match is used 15 times in the specification). After proper identification, one sees (column 5, lines 35-45): “**After the object is identified** by the system of the invention, the microprocessor **produces a signal** to restart the conveyor 1 so as to move the object through the focal plane 11, beyond the focal point 7 and outside the housing 4. “

It is important to note that there is a signal available in Novak indicating that physical characteristics substantially match, because this means that triggering Bellis’ deactivator will be straightforward. The required triggering signal is already present in Novak.

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deactivating said tag with a deactivation device after receipt of said signal and while said product is in said substantially enclosed area.

This feature is lacking in Novak and thus Bellis's teachings on the limitation are employed. As for performing deactivation while the product is in the enclosed area, that will be discussed further below.

Bellis teaches an automated checkout system which meets all of the following limitations in a checkout system/method, not including placement of the deactivator, which will be discussed below:

storing one or more physical characteristics for said product; comparing said one or more physical characteristics to said one or more physical features; generating a signal if said one or more physical characteristics substantially match said one or more physical features; and deactivating said tag with a deactivation device after receipt of said signal

As is made clear in paragraph [0040], if an item properly verifies based on physical characteristics, a security tag deactivator causes a security tag to be deactivated. Paragraph [0040] recites, in part,

"If an item is properly scanned, the electronic-article-surveillance deactivator 230 may be actuated, causing a deactivating coil to be energized and the tag on the item to be deactivated or removed." It is clear in preceding paragraphs [0026]-[0039] that "proper scanning" *means* that physical characteristics have been shown to match: see especially paragraph [0031] where it is clear that a determination is made as to whether "one or more physical characteristics substantially match the one or more physical features". The deactivation device is clearly computer-triggered in Bellis ("deactivators in communication with the

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computer” (Para [0019])) and thus whenever the deactivation device of Bellis is triggered, it *means* that a deactivation signal has been given and a deactivation signal would only be given after an item goes through the validation process (i.e. physical characteristic matching).

In view of Bellis’ teaching, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the old and well-known deactivating of a tag with a deactivation device after receipt of a signal indicating one or more physical characteristics substantially match as taught by Bellis because in many stores, products have security tags that must be deactivated during a purchasing transaction. Novak would thus be able to handle products with security tags.

As for the specific placement of the deactivator (i.e. inside or outside of the enclosure of Novak), one of ordinary skill would have been motivated to place the deactivator inside Novak’s enclosed area because this is where all product interactions take place in Novak. Novak’s entire system is essentially enclosed and there is little room for a deactivator outside the enclosure. Also, very role of the enclosure in Novak is to process products one-at-a-time in the enclosure area as Novak makes very clear (column 3, lines 17-19; column 7, lines 55+). The isolated state provided inside the enclosure of Novak presents the ideal opportunity in Novak for deactivation, as compared with areas outside of the enclosure, where multiple products could be inadvertently deactivated at once.

Re claim 10-12, 14: See column 6, lines 30-40: Weight, size and shape are all physical characteristics that Novak uses for comparison.

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Re claim 13: Lacking in Novak is a teaching of using color as an identification tool.

Bellis (paragraph [0030]) uses color as an identification tool.

In view of Bellis' teaching, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include color as an identification tool in the teachings of Novak because thus the system can arrive more quickly and accurately at identification of a product.

Re claim 15: Novak's enclosure takes objects one at a time. Novak (column 3, lines 30-50) measures the exact position of the edge of the object and captures its boundaries; clearly the system would detect and prevent the placement of two objects at once. It has been stated (column 3, lines 15-20) that objects are to be examined one at a time.

Re claims 16 and 17: Novak generates an alert to a cashier if another object is detected in the enclosed area (column 7, line 55 to column 8, line 10).

Clearly, deactivation would not then occur because verification in this situation has not been successful.

Re claims 24: See discussion re claim 9 above. Claim describes an apparatus, but a limitation-by-limitation comparison can be made with the method claim, and it is clear that each physical feature of claim 24 is implied and necessitated by a limitation in method claim 9. For example, "placing said product in a substantially enclosed area" (method claim 9) implies the enclosed area of claim 24. Similarly, 'scanner for retrieving', a 'physical characteristic evaluator', 'a computer for comparing', 'an electronic circuit for generating a signal' and 'a deactivation device' are all present in Novak/Bellis and are specifically those components in

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Novak/Bellis which perform ‘recalling said one or more physical characteristics’, ‘examining said product... establishing physical features’, ‘comparing said one or more physical characteristics’, ‘generating said signal’ and ‘deactivating said tag’ respectively.

As for a database stores the physical characteristics of the objects, see the abstract of Novak: “By use of computerized **databases**, the digitized signal is compared to the finite set of data for products of approximately the same **size, shape, weight** and other comparative variables. “ The Examiner never stated that this is lacking in Novak.

Re claims 25-29: See discussion re claims 10-14, above. These claims correspond to those claims respectively, as discussed above.

Re claims 30-32: See discussion re claims 15-17, respectively, above. These claims correspond to those claims respectively, as discussed above.

(10) Response to Argument

The Appellant has argued on at the bottom of page 4 and at the top of page 5 of the Appeal Brief that a *prima facie* case of obviousness is lacking because Novak’s checkout system and methods do not discuss security tags specifically. The Examiner agrees with the Appellant’s characterization of Novak but disagrees strongly with the Appellant’s conclusion. It is not necessary for a primary reference to teach every single limitation in an obviousness-type rejection. Indeed, the lack of deactivating a security tag is very aspect that the secondary reference cures. Novak teaches essentially all limitations of claims 9 and 24 but one, deactivation. One cannot show nonobviousness by attacking references individually where the

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rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

If the Appellant is attempting to assert that Novak is nonanalogous art, the Examiner strongly disagrees and notes that Novak is very much within the Appellant's field of endeavor, even if the field of endeavor is defined very narrowly (i.e. self-checkout systems where product properties are measured to verify product identity).

Making reference to *In re Rouffet*, the Appellant has argued incorrectly that the "Examiner is relying on an incorrect, factual predicate in support of the rejection." The Examiner makes his case with the explicit statement that deactivating of a security tag is the very aspect that is cured by the secondary reference. To argue that this limitation is missing in the primary reference is to apply piecemeal analysis for an obviousness-type rejection, which is improper.

The Appellant further argues at the bottom of page 5 that while Bellis teaches deactivating or removing a tag if the item is properly scanned, there is "no language in the cited passage [paragraph 0040 of Bellis] teaches deactivating a tag with a deactivation device after receipt of the signal generated if one or more physical characteristics substantially match the one or more physical features."

The Appellant is apparently ignoring or misunderstanding the meaning of 'properly scanned' because in Bellis proper scanning means that physical characteristics have first been determined to match. This is abundantly clear throughout preceding paragraphs [0026]-[0039]. Bellis makes clear that a deactivation signal comes from the computer, and further that this

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deactivation follows the step of verifying. The step of verifying is described in detail in paragraph [0031] where it is clear that a determination is made as to whether “one or more physical characteristics substantially match the one or more physical features”.

The deactivation device is clearly computer-triggered in Bellis (“deactivators in communication with the computer” (Para [0019])) and thus whenever the deactivation device of Bellis is triggered, it *means* that a deactivation signal has been given and a deactivation signal would only be given after an item goes through the validation process (i.e. physical characteristic matching). Computer control implies and necessitates a signal generated when a condition is met, even if this signal is not explicitly recited.

Further, Bellis would clearly not want to deactivate a tag if a product has failed the “physical characteristics” test because this would be self-defeating, defeating the whole purpose of preventing improper checkout.

The meaning of proper scanning scan can further be seen by viewing paragraph [0035], where the meaning of *unsuccessful* is defined: “unsuccessful (i.e., the measured characteristic does not match the security characteristic)”.

Thus when it is understood that the deactivation is computer controlled, and follows a proper scanning that means one or more physical characteristics match, it is clear that Bellis indeed meets the limitations, “generating a signal if said one or more physical characteristics substantially match said one or more physical features and deactivating said tag with a deactivation device after receipt of said signal”.

The Appellant next argues, at the bottom of page 5 through page 6 that Bellis does not teach deactivating “while the product is in the substantially enclosed area.” The Examiner notes that Bellis provides no guidance for either having the deactivator inside or outside the enclosure because Bellis doesn’t have that type of enclosure.

If one of ordinary skill were to add a deactivator to Novak, as Bellis teaches, one would have been very motivated to place the deactivator inside Novak’s enclosed area for two reasons:

(1) All product interaction in Novak takes place in the enclosed area. The way Novak is physically arranged, most of the checkout area is enclosed (see figure 1), and most areas where one *could* place a deactivator fall inside the enclosed area.

(2) Novak explicitly aims to isolate products one-at-a-time in the enclosure area (column 3, lines 17-19; column 7, lines 55+) and this isolated state presents the ideal opportunity in Novak for deactivation.

Deactivation ahead of or after the enclosure of Novak would be contrary to the point and purpose of Novak’s enclosure because Novak aims to isolate products for processing and on either side of the enclosure, products can be bunched together.

The fact that the deactivators in Bellis are outside of the tunnel of figure 2 in Bellis has no bearing on the present case, because tunnel 602 of Bellis is not an enclosure in the sense of the Instant Invention or Novak. The tunnel of Bellis is not an enclosure in the sense of the Instant Invention or Novak for several reasons: (a) it does not aim to isolate products, and is indeed open on either side, (b) it is merely a part of a device for measuring size and shape and surrounds no other checkout systems and (c) it does not even meet the definition of enclose, i.e.

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“To surround on all sides; close in” (Amer. Heritage Dict., 4th Ed. © 2000 by Houghton Mifflin). Nowhere does Bellis mention a goal of isolating products with his tunnel, which is clearly the whole point of the enclosure of either Novak or the Instant Invention. Bellis’ tunnel instead is really just part of an optional measuring device, with many other measuring devices.

The Appellant concludes, “Consequently, as far as use of a tunnel or housing is concerned, *Novak adds little to Bellis.*” **This statement makes no sense in light of the present rejection because Novak is not modifying Bellis: Bellis is modifying Novak!**

If one adds a deactivator to Novak, as per Bellis’ teaching, one is forced decide whether to place this deactivator inside or outside of the enclosure of Novak. Bellis adds nothing to this choice because Bellis does not have an isolating enclosure (Bellis’ tunnel is not an isolating enclosure). **After determining based on Bellis to add a deactivator to Novak, one studying Novak would have been strongly motivated to place the deactivator(s) inside Novak’s enclosure for the numbered reasons above.**

With respect to the Appellant’s questioning of the Examiner’s ground of rejection of 24, the Examiner points out that reference is made to the rejection of claim 9. A careful review of the rejection of claim 9 shows that the various limitations called into question are clearly present.

On page 8, the Appellant argues that “retrieving from said database said one or more physical characteristics” is not taught in either Novak or Bellis. Nothing could be further from the truth! In fact Novak, our primary reference, makes some more than a dozen references to

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using a database in making comparisons of physical characteristics. Some of the more notable of these include:

(column 4, lines 39+): "One of the physical attributes that varies substantially from product to product is the product weight. ... By organizing the numerous objects encoded in the look-up files of the **database** into groups by **weight**, the proper group only need to be searched to find the digital representation of the object to be identified."

(column 6, lines 55+): "This **shape** is correlated to other objects in the subset **database** to further restrict the set of objects that must be searched for a match--such as square, circular, oblong, etc."

Abstract: "By use of computerized **databases**, the digitized signal is compared to the finite set of data for products of approximately the same **size, shape, weight** and other comparative variables. "

Also on page 8, the Appellant argues that a 'physical characteristic evaluator for establishing one or more physical features of said product while said product is in substantially enclosed area' has not been shown. The Examiner strongly disagrees, and notes that his final rejection stated in part:

Figure 1 shows that all manner of examinations are performed on the product while it is in the enclosed area, ranging from bar code scanning (ref. 16) to size/shape analysis by a camera (ref. 10) to weighing by a scale (ref. 12). See also column 3, lines 15-65.

Size, shape and weighing sensors are all 'a physical characteristic evaluator for establishing one or more physical features of the product while it is in the enclosure'!

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The Appellant further argues on page 9 that Novak/Bellis do not teach “a computer for comparing said one or more physical characteristics to said one or more physical features.”

Nothing could be further from the truth. Quoting the Examiner’s final action, the Examiner wrote,

As Novak teaches (column 2, lines 35+):” This identification is made by computerized comparison to the digital image stored in the memory of the system. Alternatively, the identification can be made or confirmed by computerized analysis of the characteristics of the product (such as shape, weight...”

Clearly computerized comparison necessitates a computer for comparing!

As yet further illustration of this, see figure 4, which illustrates the concept elegantly. Data coming into the sensors about the physical characteristics of the product is compared in a microprocessor with that which is stored in memory.

Appellant yet further contends on page 10 that Novak/Bellis do not teach or suggest “an electronic circuit for generating a signal if said one or more physical characteristics substantially match said one or more physical features.”

This is patently false. To quote the Examiner’s final rejection,

See column 2, line 30 of Novak: There is a “precise determination of proper identity.” Identify means find a match (the word match is used 15 times in the specification). After proper identification, one sees (column 5, lines 35-45): “**After the object is identified** by the system of the invention, the microprocessor **produces a signal** to restart the conveyor 1 so as to move the object through the focal plane 11, beyond the focal point 7 and outside the housing 4. “

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As for a 'deactivation device for deactivating said tag after receipt of said signal while said product is in said substantially enclosed area' this has clearly and in detail been addressed with regard to claim 9 above. A method of 'deactivating said tag' clearly implies deactivators. Bellis has several such as deactivator ref. 230.

Regarding claims 15 and 16, Novak clearly has ways of detecting multiple objects in the enclosed area. See for instance column 7, lines 55-60. An inability to identify an object – which may be due to two objects placed simultaneously – alerts a cashier in the store, in order that the cashier can correct the problem.

This is one way of preventing multiple objects from going into the enclosed area. This is much like in the Instant Invention, where multiple objects are prevented not by being blocked but by triggering a response after a second object has been inserted.

As for an alert signal, Novak teaches that in the case of a problem, possibly due to multiple objects on the conveyor, (column 7, lines 55+) "a direct video signal depicting the object is forwarded to the central station along with data..." This video signal serves as an alert.

Regarding claim 17, deactivation in Bellis hinges on a 'proper scan' [0040] and a proper scan means in part that the object is properly identified. In the "multiple object" scenario of column 7, lines 55-60, an object is not properly identified and thus deactivation would not occur.

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In response to Appellant's questioning of the motivation to combine (pages 15 and 16), the Examiner points out that it is most certainly permissible for a motivation to derive from what is known in the art.

In the present case, one of ordinary skill in the art would clearly have known, and would have been reminded by Bellis, that in many stores, the checkout process requires deactivation of a security tag. In such cases the advantage of being able to handle a security tag is clear. Novak's system could be employed in a store that heavily used security tags unless it provided a way to handle them.

As for point 'G' argued by the Appellant on page 17, a database for storing physical characteristics of a product is described throughout Novak, including notably the abstract: "By use of computerized **databases**, the digitized signal is compared to the finite set of data for products of approximately the same **size, shape, weight** and other comparative variables. " The Examiner never stated that this is lacking in Novak.

For the above reasons, it is believed that the rejections should be sustained.

(11) Related Proceeding(s) Appendix

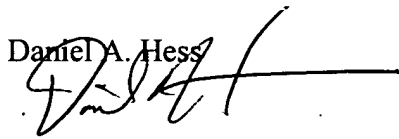
No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

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For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Daniel A. Hess



STEVEN S. PAIK
PRIMARY EXAMINER

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